

CLAIMS

1. A mobile radio communication device for transmitting/receiving data to/from an external radio communication apparatus located in an area that allows radio communication, the mobile radio communication device including:
 - a radio-signal transmitting/receiving unit for performing radio communication with the external radio communication apparatus;
 - a connection unit detachably connected to an IC card that receives power supply from the mobile radio communication device, that manages data transmitted/received to/from the external radio communication apparatus, and that manages a communication mode state of the mobile radio communication device;
 - radio-signal strength determining means for determining whether or not a strength of radio signals received from the external radio communication apparatus is less than or equal to a preset threshold value; and
 - IC-card-mode initializing means for resetting a mode of the IC card to an initial state when the radio-signal strength determining means determines that the strength of the received radio signals is less than or equal to the threshold value.

2. A mobile radio communication device for transmitting/receiving data to/from an external radio communication apparatus located in an area that allows radio communication, the mobile radio communication device
 - 5 including:
 - a radio-signal transmitting/receiving unit for performing radio communication with the external radio communication apparatus;
 - a connection unit detachably connected to an IC card
 - 10 that receives power supply from the mobile radio communication device, that manages data transmitted/received to/from the external radio communication apparatus, and that manages a communication mode state of the mobile radio communication device;
 - 15 radio-signal strength determining means for determining whether or not a strength of radio signals received from the external radio communication apparatus is less than or equal to a preset threshold value; and
 - clock-signal controlling means for stopping supply of a
 - 20 clock signal to the IC card when the radio-signal strength determining means determines that the strength of the received radio signals is less than or equal to the threshold value, wherein the IC card comprises mode initializing means for putting a mode of the IC card into an
 - 25 initial state when the supply of the clock signal is stopped.

3. A mobile radio communication device for transmitting/receiving data to/from an external radio communication apparatus located in an area that allows radio communication, the mobile radio communication device
 - 5 including:
 - a radio-signal transmitting/receiving unit for performing radio communication with the external radio communication apparatus;
 - a connection unit detachably connected to an IC card
 - 10 that receives power supply from the mobile radio communication device, that manages data transmitted/received to/from the external radio communication apparatus, and that manages a communication mode state of the mobile radio communication device;
 - 15 radio-signal strength determining means for determining whether or not a strength of radio signals received from the external radio communication apparatus is less than or equal to a preset threshold value; and
 - reset-signal generating means for transmitting a reset signal to the IC card when the radio-signal strength determining means determines that the strength of the received radio signals is less than or equal to the threshold value, wherein the IC card includes mode initializing means for resetting a mode of the IC card to an initial state upon receiving the reset signal.

4. The mobile radio communication device according to one of claims 1 to 3, further including radio strength threshold-value setting means for setting the threshold value in accordance with a predetermined condition.

5 5. The mobile radio communication device according to one of claims 1 to 3, further including data transmission stopping means for stopping transmission of data to the IC card when the radio-signal strength determining means determines that the strength of the received radio signals
10 is less than or equal to the threshold value.

6. The mobile radio communication device according to one of claims 1 to 3, wherein the mobile radio communication device is incorporated in a mobile phone terminal and the transmitting/receiving unit is connected to an antenna built
15 into the mobile phone terminal.

7. The mobile radio communication device according to claim 6, wherein the IC card is integrated with a SIM card detachably connected with the mobile telephone terminal and is provided.

20 8. A mobile radio communication device for transmitting/receiving data to/from an external radio communication apparatus located in an area that allows radio communication, the mobile radio communication device comprising:

25 a radio-signal transmitting/receiving unit for

performing radio communication with the external radio communication apparatus;

a connection unit detachably connected to an IC card that receives power supply from the mobile radio
5 communication device, that manages data transmitted/received to/from the external radio communication apparatus, and that manages a communication mode state of the mobile radio communication device;

radio-signal strength determining means for determining
10 whether or not a strength of radio signals received from the external radio communication apparatus is less than or equal to a preset threshold value;

power-supply stop instructing means for giving an instruction for stopping power supply to the IC card when
15 the radio-signal strength determining means determines that the strength of the received radio signals is less than or equal to the threshold value; and

power-supply stopping means for stopping the power supply from a power source to the IC card in accordance with
20 the instruction given from the power-supply stop instructing means.

9. The mobile radio communication device according to claim 8, further comprising radio strength threshold-value setting means for setting the threshold value so as to
25 correspond to a predetermined condition.

10. The mobile radio communication device according to
claim 8, further comprising data transmission stopping means
for stopping the transmission of data to the IC card when
the radio-signal strength determining means determines that
5 the strength of the received radio signals is less than or
equal to the threshold value.

11. The mobile radio communication device according to
claim 8, wherein the mobile radio communication device is
incorporated into a mobile phone terminal and the IC card is
10 provided separately from a SIM card that is detachably
connected to the mobile phone terminal.